



NOVASAIL
NS360
POCKET^{V2}

Operating Manual

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Welcome to the **NS360 POCKET^{V2}**

A complete racing system derived from the **NS** legacy, the

NS360 POCKET^{V2} includes a GPS speedo, 9 axis gyro-compensated magnetic compass, race timer, distance to the start line and all other essential and advanced race functions.

The new **V2** version has an upgraded button panel and an LCD mounted on a soft silicon pad to withstand the toughest environment. It features also a Bluetooth communication transceiver offering a wide range of functions and applications:

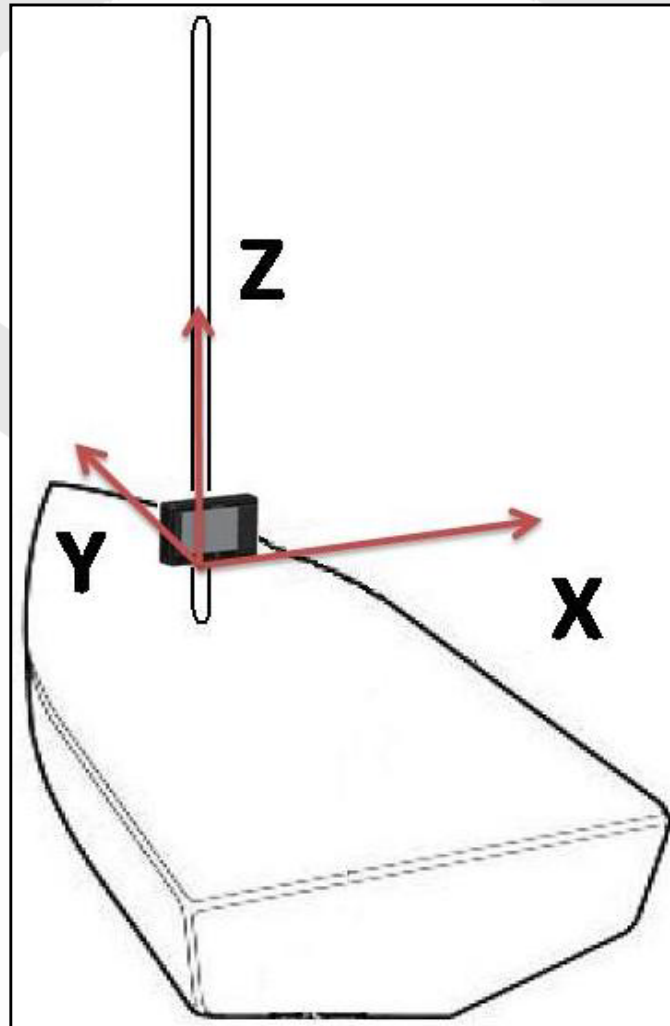
- Record up to 1092 hours of racing (1 point / 30 seconds)
- Wireless connectivity to a PC, Macbook, external anemometer
- Replay on Google Earth and other navigational software
- Computer management of 100 waypoints, including their coordinates and descriptions
- Computer management of 20 routes imported from Google Earth and defined by existing waypoints
- Updates with new features

The usage of the **NS360 POCKET^{V2}** is greatly simplified with 3 buttons dedicated to starting the timer and defining the start line points at your finger tips.

Installation

The mounting location should be as far as possible from any magnetic objects to avoid any interference with the magnetic compass sensor.

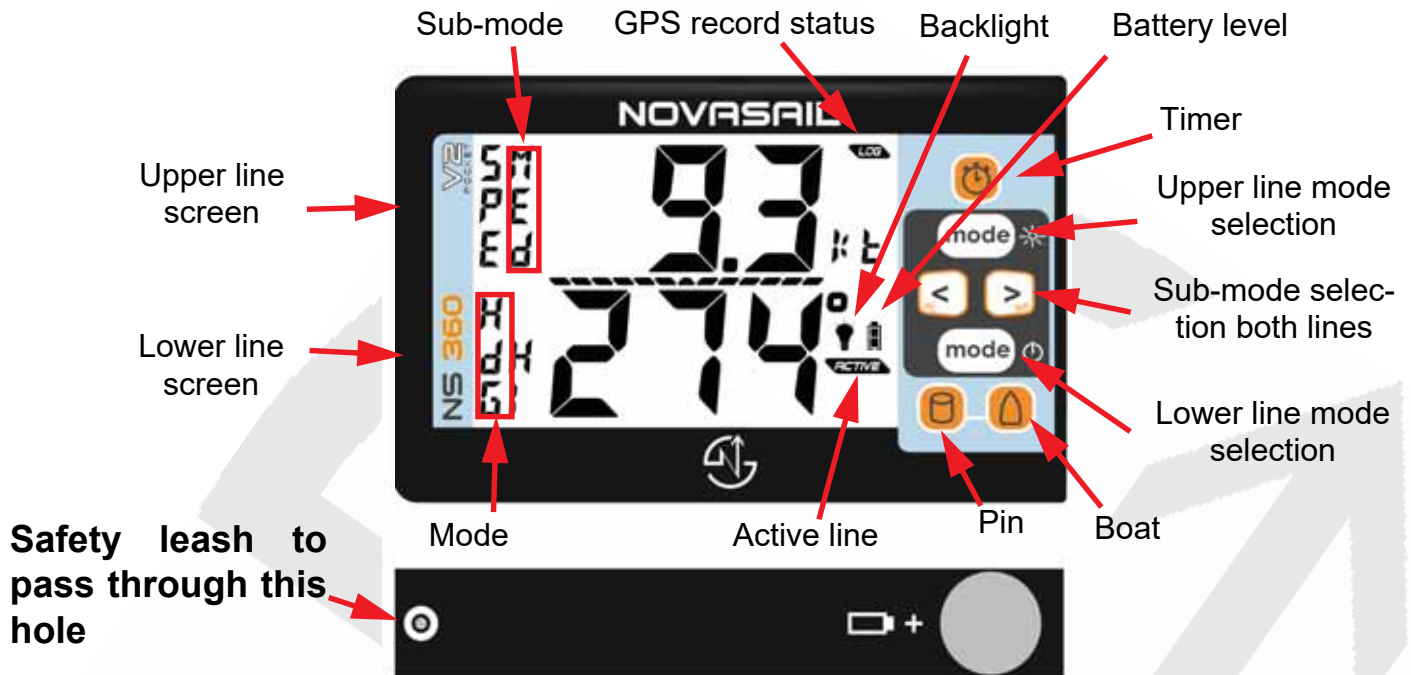
The **NS360 POCKET^{V2}** should be mounted close to the vertical and horizontal planes.



*Note: Wherever you mount the **NS360 POCKET^{V2}**, it shouldn't be flush to any thick surface such as the hull, so that the sensitivity of the embedded GPS receiver is not affected.*

*Note: If your **NS360 POCKET^{V2}** isn't facing the same direction as the boat, you can compensate this difference in the parameter tab of the "NS360 Pocket V2 Wireless Manager" PC software.*

Controls and display description



Modes and sub-modes

Timer:

TIM

Speed:

SPE

- **Hi**: High sensitivity
- **Med**: Medium sensitivity
- **Lo**: Low sensitivity
- **MAX**: Maximum speed
- **TRP**: Total distance

Velocity made good:

VMG

Magnetic Heading:

HDG

- **Hi**: High sensitivity
- **Med**: Medium sensitivity
- **Low**: Low sensitivity
- **GPS**: GPS based
- **ROL**: Roll angle indicator

Start Line Distance:

SLD

Waypoints:

Wxx

- **W00 to W99**: Waypoint 0 to 99

Routes:

Rxx

- **R01 to R20**: Route 1 to 20

Current GPS coordinates:

Latitude & Longitude

Operations

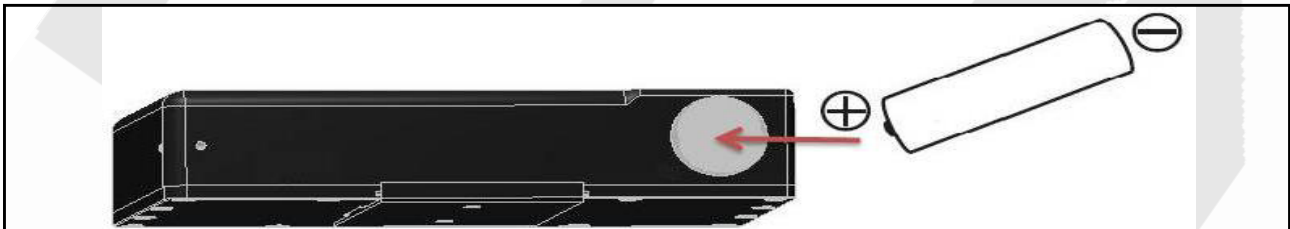
Wind information

xWx

- **AWA & AWS:** Apparent wind angle & apparent wind speed
- **TWA & TWS:** True wind angle & true wind speed
- **DWI:** Battery level indicator & temperature of wind sensor

Switching power on and off

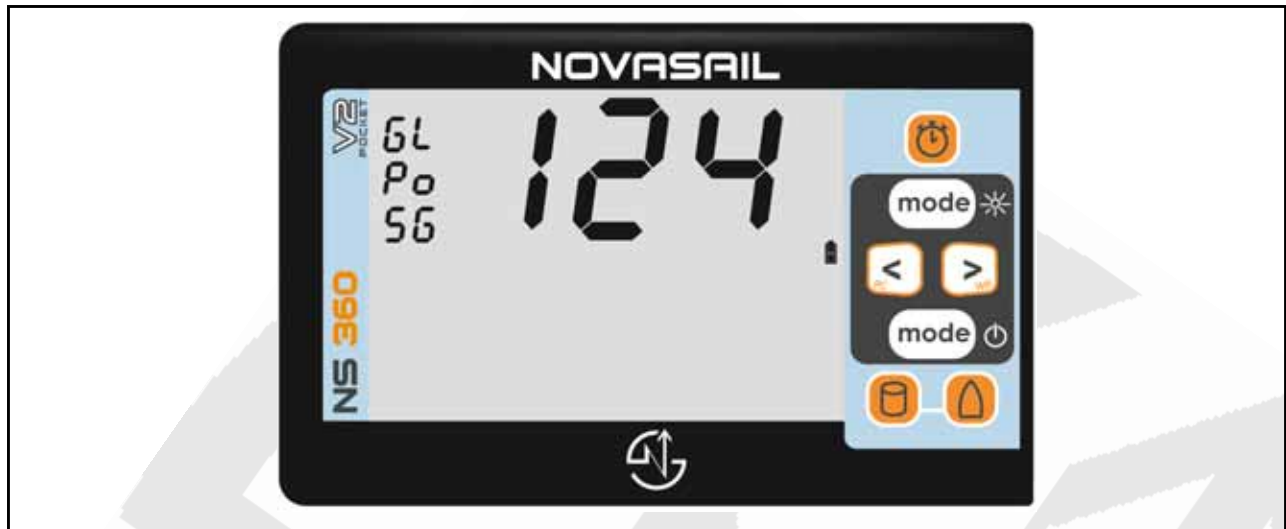
- Make sure the battery is installed with the correct polarity and has enough remaining power (positive pole inserted first).



- Press the lower **mode** to start the device.
- Press and hold the lower **mode** for more than 4 seconds until the screen displays OFF and the sequence “3”, “2”, “1” is finished.

The device will turn off automatically when it remains in the horizontal position for more than 3 minutes.

Upon switching on, the remaining memory time for the data logger is displayed for 5 seconds. This 'GPS LOG' time is given in hours as shown below. The embedded firmware version number is displayed on the lower line.



Note: If the device does not turn on, you need to check that the battery is fully charged, that the battery compartment is clean, dry and the polarity is correct. No liquid should get into the battery compartment otherwise this may cause internal damage. The 2 springs for the +/- battery contacts can be removed/cleaned as well as the bottom of the battery compartment with a small piece of cloth moistened with rubbing alcohol.

Note: Rinse with fresh water, do not use corrosive products. Especially any petroleum/mineral based product will damage permanently the plastics and rubber parts (the warranty will be void). For example never use (non exhaustive list): white spirit, acetone, any spray or liquid contact cleaner, grease remover, do never spray any product into the battery compartment.





Note: If the battery is almost discharged, the GPS functions are automatically deactivated ('OFF' is displayed) in order to save power. Only the functions linked to the magnetic compass are activated and the battery indicator will blink.


*Note: Until enough satellites are locked, the **NS360 POCKET V2** is not ready for use. For the modes SPE, SLD, VMG and Wxx, the screen displays '---'. For the MAX speed sub-mode, the maximum value is displayed but blinking until ready.*

Operations







*Note: Disposable alkaline batteries are not recommended, but can be used to reach the maximum 40-hour battery life of the **NS360 POCKET^{v2}**. It is **mandatory** to remove disposable batteries if the device is not going to be used for a prolonged period of time (a week or more) to avoid **battery leakage**, as this will **irreversibly damage the battery compartment**. Therefore we recommend that rechargeable batteries with a low self discharge rate should be used (normal rechargeable batteries lose their stored energy quickly even when they are not being used), and will last for 30 hours or more. Recommended batteries are SANYO ENELOOP, GP RECYKO+, UNIROSS HYBRIO (2000mA or more typical capacity).*

Switching backlight on and off

- Press and hold upper  for more than 1 second until the icon  is displayed on the screen.
- To turn off the backlight, press and hold the upper  for more than 1 second until the icon  disappears from the screen.

Note: When you press and hold the upper  button to switch on/off the backlight, you will not make any mode selection.

Activate a line, Switching modes and sub-modes

- A line is 'ACTIVE' when the icon  appears inside. To activate a line, you need to push  once in front of the chosen line. The icon  appears.
- After activating a line, choose the mode and sub-mode required on the 'ACTIVE' line by pushing  and then the arrows  and  for the sub-mode selection.
- You are free to choose any mode on each line **independantly**.

GPS record status

- When the icon **LOG** is displayed, the GPS trace is recording.
- The "NS360 Pocket V2 Wireless Manager" PC software gives you three options at startup : GPS trace record disabled, GPS trace record always ON and GPS trace record starts at the end of timer countdown.
- The **NS360 POCKET^{v2}** will record the current latitude, longitude, altitude, roll, pitch, GPS heading (course over ground), magnetic heading, GPS speed, wind speed and wind direction (if an external anemometer is connected, see "Anemometer mode", page 28)
- For more information please refer to the online manual of the "NS360 Pocket V2 Wireless Manager" PC software.

Operations

Speed mode: SPE

This mode provides the speed over ground of the boat as measured by the GPS receiver. The sub-modes provide several speed resolutions, the trip distance and the maximum speed. The boat speed is displayed in knots (kts) with an accuracy of 0.1 knots. The minimum speed is 0.5 knots.

- Use the arrows  and  to scroll the sub-modes.

Speed sub-modes

- **Hi: High sensitivity**

The high sensitivity speed allows a very sensitive reading of any speed variation.

- **Med: Medium sensitivity**

This sub-mode provides an average speed of the boat over a short period of time. This is particularly useful when sailing with big waves upwind or downwind.

- **Low: Low sensitivity**

This sub-mode provides an average speed of the boat over a longer period of time. This is particularly useful in rough conditions with lots of speed changes.

- **Max: Speed MAXimum**

The maximum speed that the boat has reached since the last reset.

Note: For the 'Max' sub-mode, don't forget to reset the maximum speed before your next sail begins to ensure the value displayed refers to the new trip.

- **TRP: TRiP distance**

The TRP mode displays the total distance made by the vessel since the last reset.

Note: For the 'TRP' sub-mode don't forget to reset the trip before your next sail begins to ensure the value displayed refers to the new trip.



To reset the maximum speed or trip distance:

- Select the maximum speed or the trip distance in the sub-mode
- Tilt the device 90 degrees to the right or left for more than 3 seconds
- The selected sub-mode is reset

Velocity made good mode: VMG

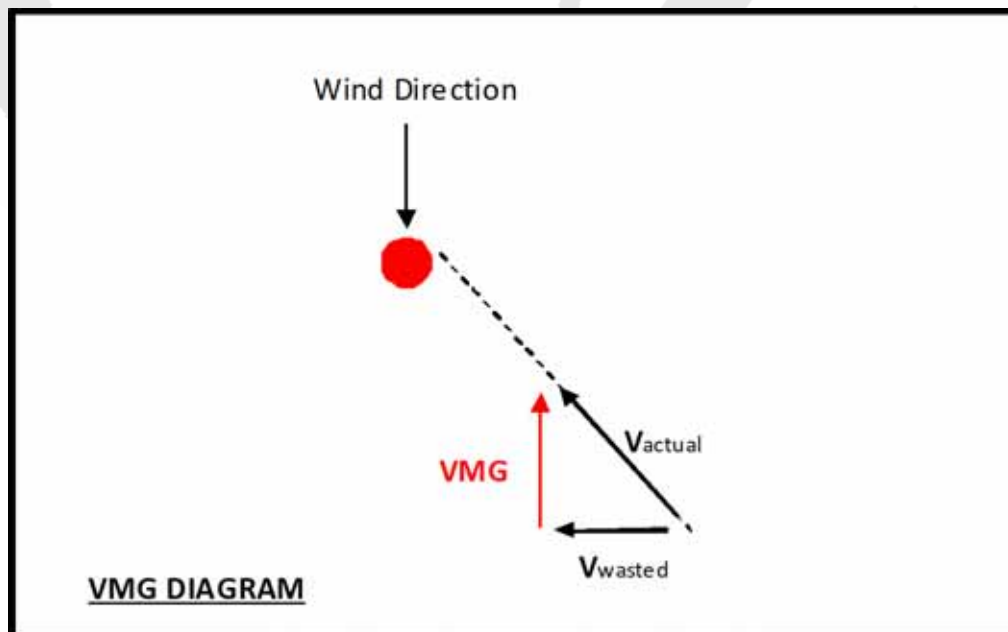
This mode provides the projected speed of the boat on the reference (wind) direction. The VMG is shown in knots (kts).

To set and adjust the wind direction in VMG mode

- You can adjust the wind direction reference with the arrows  and 

Note: The VMG speed sensitivity is adjusted (High/Med/Low) by using the sensitivity of the speed in SPE mode on the opposite line (lines are independent, therefore the sensitivity can be different on the upper and lower line).

Note: The wind direction is computed automatically once an external anemometer is connected (see “Anemometer mode”, page 28).



Operations

Magnetic Heading compass mode: HDG

To win races you need to react to the smallest wind shifts. The

NS360 POCKET^{V2} digital compass delivers precise and reliable heading information to help you to tack and jibe at the most suitable times.

The sensitivity of the compass can easily be adjusted to High, Medium or Low by scrolling through the sub-modes.

- Use the arrows  and  to scroll the sub-modes

Sub-modes of the Magnetic Heading compass:

- **Hi: High sensitivity**

When sailing with light winds and flat seas, high sensitivity allows you to appreciate very small wind variation.

- **Med: Medium sensitivity**

Medium sensitivity is more suitable for race boats under medium wind and sea conditions. Dinghy racers will appreciate this mode.

- **Low: Low sensitivity**

Under low sensitivity more subtle variations due to big waves and sudden gusts are filtered.

Note: The magnetic variation of your geographical location can be compensated in the parameter tab of the "NS360 Pocket V2 Wireless Manager" PC software.

- **GPS: GPS based compass**

This sub-mode provides the route followed by the boat measured by the GPS receiver.

- **ROL: Roll angle indicator mode**

Used in Roll angle indicator (ROL) mode, the **NS360 POCKET^{v2}** displays the roll angle of the boat.

*Note: The roll angle displayed is based on the **NS360 POCKET^{v2}** roll angle.*

TIMER mode: TIM

This mode offers a 5-minute countdown timer which can be synchronized to 4/3/2 and 1 minutes.

Start and stop the TIMER:

- Press 🕒 to start the timer countdown at the last synchronized minute (5/4/3/2 or 1 minute)
- Press and hold 🕒 to stop the timer and reset to the last synchronized minute

Synchronize the TIMER:

- In any mode press 🕒 will display the timer on the upper line and result in the following action:
 - if the timer is stopped, start and set the timer value to the last synchronized minute
 - if the timer is down-counting and the timer value is lower than 3:45, set the timer value to the lower minute
 - if the timer is down-counting and the timer value is greater than 3:45, set the timer value to 4 minutes
- With the timer mode displayed and the timer stopped, press the upper ⏪ to synchronize to the lower minute or press the upper ⏩ to synchronize to the upper minute. The upper/lower minute selected will be used as the new synchronized minute value (the timer will re-start from this value)

Operations

Note: With the GPS logger synchronized to the upcounting of the timer (see in the parameter tab of the "NS360 Pocket V2 Wireless Manager" PC software), the GPS logger stops when the timer is stopped or restarted.

Note: The timer is displayed until it reaches 0:00, unless you press and hold 🕒 to stop the timer.

Note: When the down counter reaches 0:00, the timer and the Start Line Distance will switch automatically to the modes selected in the parameter tab of the "NS360 Pocket V2 Wireless Manager" PC software.

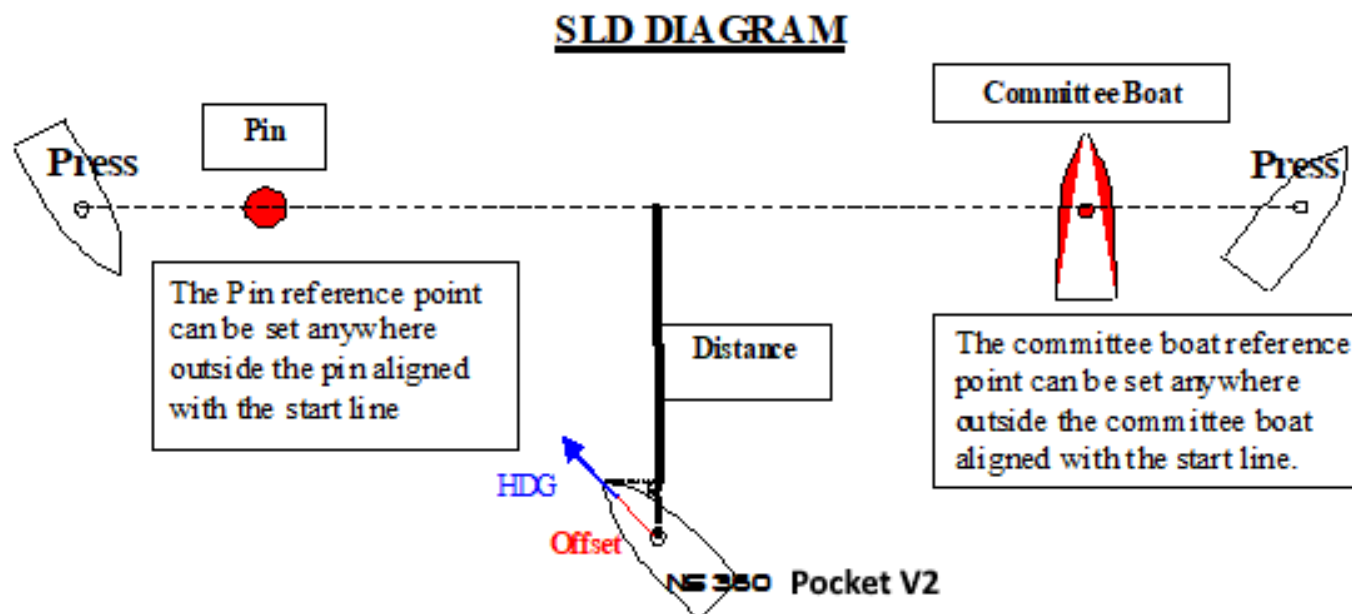
Start Line Distance: SLD

Knowing the exact distance in meters to the start line gives a huge advantage in helping you start ahead of the fleet and even win the race. The



NS360 POCKET^{V2} start line distance function is the most advanced on the market as it combines 1 meter accuracy and a dynamic boat offset compensation calculated with the real boat magnetic heading to the start line. The maximum distance displayed is 999 meters to the start line.

The start line consists of 2 points that have to be aligned with the start line:

- 🚤 : Committee boat
- 📌 : Pin



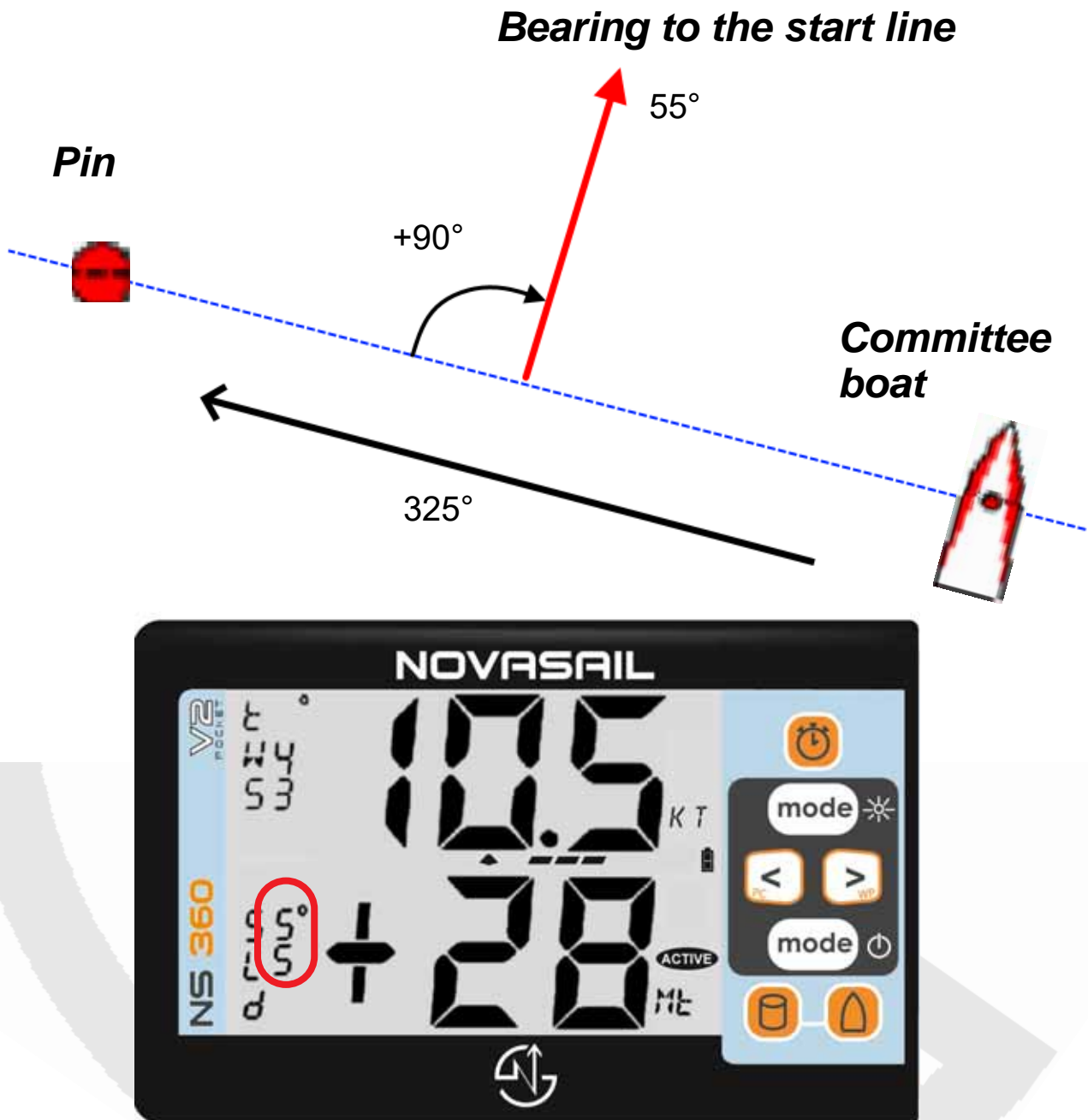
To memorize the start line points

- Press  when you reach the committee boat reference point
- Press  when you reach the pin reference point
- The distance in meters is now displayed on the data line

Optimum bearing to the start line

Once the 2 start line points are recorded, the bearing to the start line is displayed on the left column. It is calculated as the bearing from the committee boat to the pin and adding 90°. The optimum bearing is the direction to follow to achieve the shortest path for crossing the start line.

Operations



Note: If the start line is modified by the committee, you may be required to re-enter one or both reference points.

*Note: The distance from the front of the boat to the **NS360 POCKET V2** can be defined in the parameter tab of the "NS360 Pocket V2 Wireless Manager" PC software.*

Note: When the down counter reaches 0:00, the timer and the Start Line Distance will switch automatically to the modes selected in the parameter tab of the "NS360 Pocket V2 Wireless Manager" PC software.



Operations

Waypoint mode: Wxx

The waypoint mode has been made for those who are sailing island races and require information such as the direction, speed and distance to reach the selected pre-defined waypoint. Up to 100 waypoints can be memorized: W00 to W99. For each waypoint selected on the **NS360 POCKET^{v2}**, the direction, the heading difference between the boat and the direction to the waypoint, speed and distance needed to reach it are displayed sequentially.

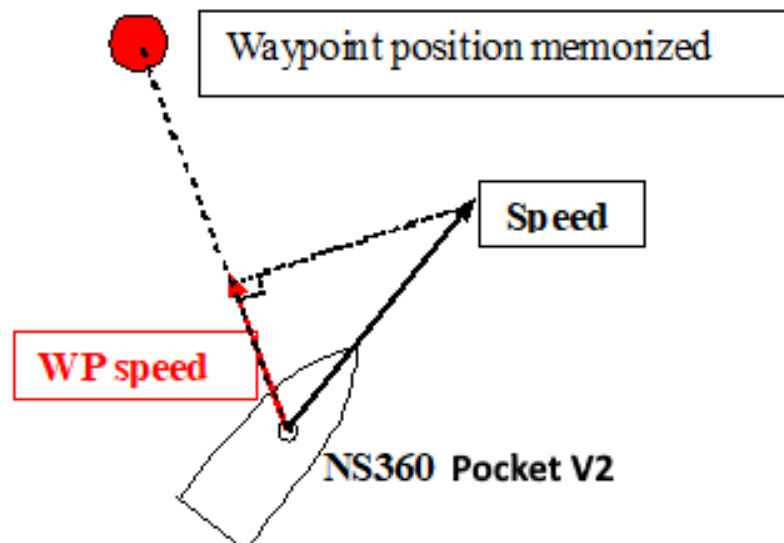
Note: The display timings of the directions, speed and distance are defined by the parameters Waypoint Heading, Waypoint Speed and Waypoint Distance in the Novasail Wireless Manager PC software. Please refer to the installed online documentation for more details.

To use a waypoint

- By default, W00 is displayed on the mode line.
- Use the arrows  and  to select the required waypoint, from W00 to W99.
- The direction, speed and distance are displayed sequentially.

The waypoint speed displayed in knots is calculated using the waypoint position, the boat position, the boat speed and the heading.

WayPoint Speed DIAGRAM







Route mode: Rxx

The Route mode has been made for those who are sailing island races and require information such as the direction and distance to reach the series of pre-defined waypoints. Up to 20 routes, made up of up to 500 waypoints can be memorized: R01 to R20. Each time a route is selected, the direction, speed and distance needed to reach its waypoints are displayed sequentially.

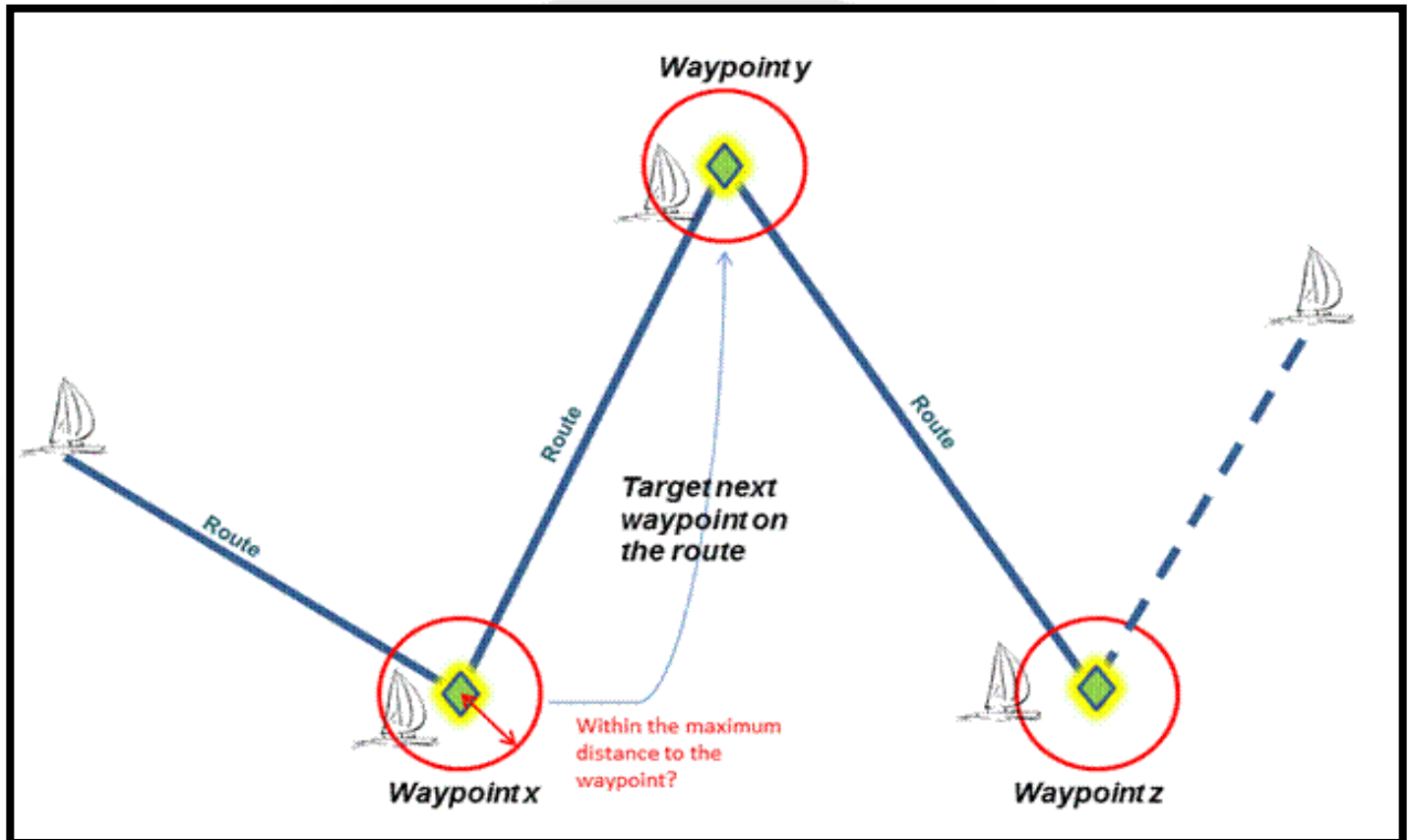
When getting within 50 to 500 meters (settable thanks to the "NS360 Pocket V2 Wireless Manager" PC software) to a waypoint, the route will switch to the next waypoint automatically.

To use a route

- By default, R01 is displayed.
- A long push on  or  will select the route from R01 to R20 then a short push on  or  will decrease/increase the route number.
- The name and the waypoint number are displayed sequentially on the sub-mode column.

Operations



- A push on or will select the previous or the next waypoint into the current route.
- The direction, speed and distance to the target waypoint on the chosen route will be displayed sequentially on the main screen.



Note: It is necessary to upload the routes into the **NS360 POCKET^{v2}**

Note: The display timings of the direction, speed and distance are defined by the parameters *Waypoint Heading*, *Waypoint Speed* and *Waypoint Distance* in the *Novasail Wireless Manager PC* software. Please refer to the online documentation for more details.

Current GPS coordinates


This mode allows the latitude and longitude of the current position to display (in degrees and decimal minutes). To activate this mode, you need to press the arrows  and  simultaneously. The latitude is displayed on the upper line and the longitude on the lower line.

Press  on to exit this mode.

Central Bar Graph

The central bar graph allows the visualization of the heading variations. After a tack or a jibe, during the average heading calculation, the bar graph displays:



Once calculated, the average heading is used as the reference to display the variations in degrees. For example  means that the current heading is 3 degrees starboard compared to the average reference heading, with a 1 degree value for each segment.

Note: When an external anemometer is paired with the

NS360 POCKET^{v2} *the central bar graph will operate as described in the chapter “Anemometer mode”, page 28*

Operations

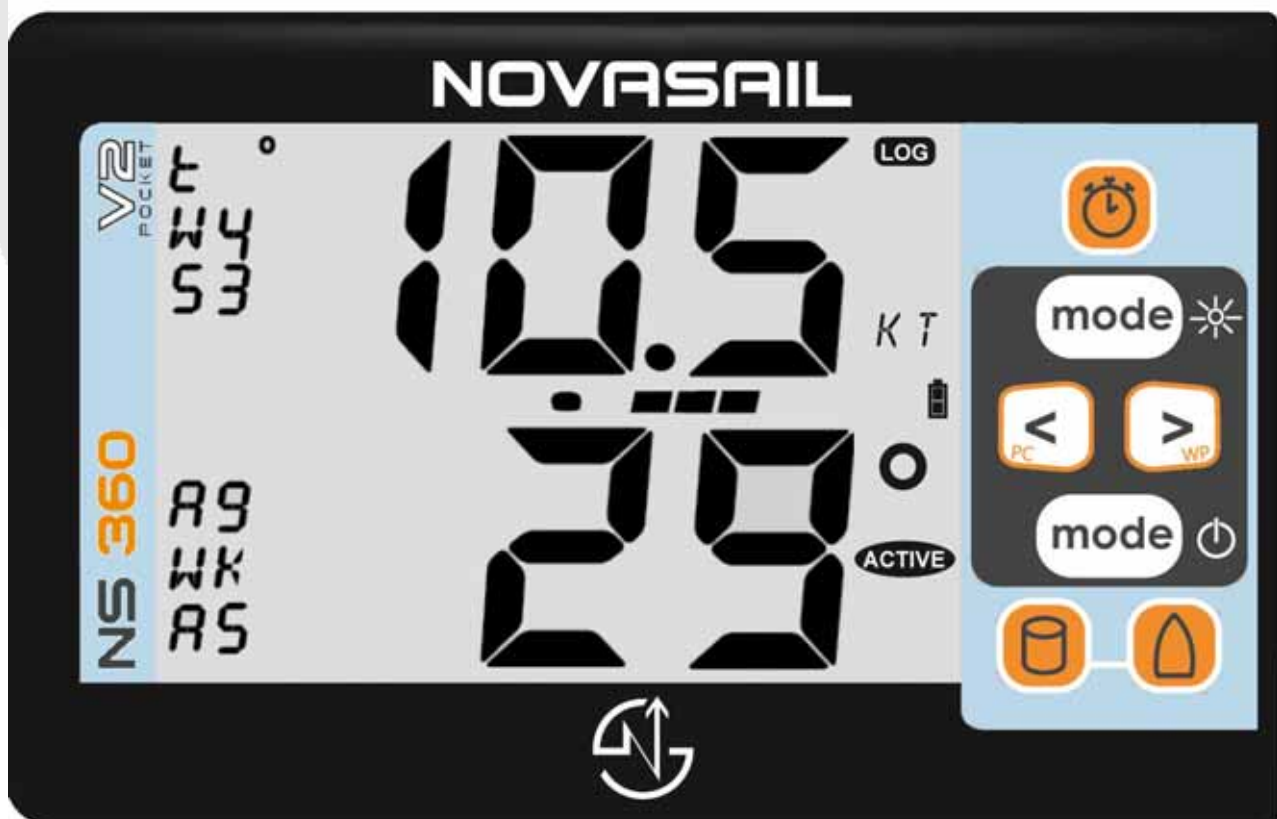
Anemometer menu and sub menus

Note: in order to display the wind information a compatible external wind sensor must be installed, see “List of supported wind sensor anemometers”, page 30.

In this mode the **NS360 POCKET^{v2}** will display the wind information : true wind speed “TWS”, true wind angle “TWA”, apparent wind speed “AWS”, apparent wind angle “AWA”, the wind sensor battery level and the wind sensor internal temperature “dWI” (manufacturer dependant, displayed if supported)

On the following picture, the **NS360 POCKET^{v2}** displays:

- a true wind angle of 43 degrees (left column upper line)
- a true wind speed of 10.5 knots (upper line)
- an apparent wind speed of 9.5 knots (left column lower line)
- an apparent wind angle of 29 degrees (lower line)



Five sub-menus for the wind sensor data can be selected with  and .

- **AWS & AWA:** Apparent wind speed or apparent wind angle

This sub-mode provides the apparent wind information as received by the

NS360 POCKET^{v2}. The apparent wind speed or the apparent wind direction can be displayed on the main line or the left column

- **TWS & TWA:** True wind speed or true wind angle


This sub-mode provides the true wind information as calculated by the

NS360 POCKET^{v2} thanks to the GPS speed information. The true wind speed or the true wind direction can be displayed on the main line or the left column

- **DWI:** Data wind information

This sub-mode provides the battery level 'batx' x=0 (low battery) to 9 (full) & temperature 'txx°' with xx being the temperature in degrees of the external wind sensor device (whenever available upon manufacturer spec)

Note: In order to connect the **NS360 POCKET^{v2}** to an external anemometer please refer to *the chapter "To pair the external anemometer", page 28*




Note: once the anemometer is connected and the GPS trace is active ( icon is displayed), the **NS360 POCKET^{v2}** will record the wind information in the GPS trace. It can be exported with the PC software 'Novasail Wireless Manager' to a third party software for debriefing analysis.

Advanced Operations





WAY Mode

The **WAY** mode allows waypoints in your **NS360 POCKET^{v2}** to be memorized with a name (3 characters) and the geographical coordinates.

To enter the WAY mode:

- With the product switched off, press the arrow  then the lower  **simultaneously**. WAY is displayed on the data line of the upper screen.
- The waypoint number and name are displayed in the mode lines of the upper screen.
- The geographical coordinates are displayed in the lower screen.
- To exit, press and hold the lower .

How to input the name and coordinates of a waypoint

- The arrows  and  allow the value from 0 to 9 for numbers and from 'a' to 'z' for letters to be changed.
- The lower  switches to the next character.
- The upper  switches to the previous character.

Memorization of a waypoint




- Select first the number of the waypoint: W00 to W99.
- Enter a name of 3 characters.
- Select 'NOR' (North) if the longitude is in the northern hemisphere or 'SOU' (South) if it is in the southern hemisphere.
- Memorize the longitude coordinate. For example 45'36.222.
- Select 'EAS' if the latitude is east or 'WES' if west.
- Memorize the latitude coordinate. For example: 23'46.345.
- When the latitude coordinate is completed, it rolls back to the selection of the waypoint number.

PC Mode

The **PC** mode is activated to exchange data between the

NS360 POCKET^{v2} Bluetooth wireless transceiver and the computer. The "NS360 Pocket V2 Wireless Manager" software allows you to check the communication status, upgrade the embedded firmware, store routes and waypoints, setup the device. Please refer to the Novasail Wireless Manager documentation for more details; the online manual can be open with a right click on the "NS360 Pocket V2 Wireless Manager" main window.

To enter in PC connectivity mode

- With the product switched off, press the buttons  first and the lower  **simultaneously**. PC is displayed on the data line of the lower screen (blinking) with “blu” (bluetooth) shown
- To exit the PC mode, switch off by pressing and holding the lower 

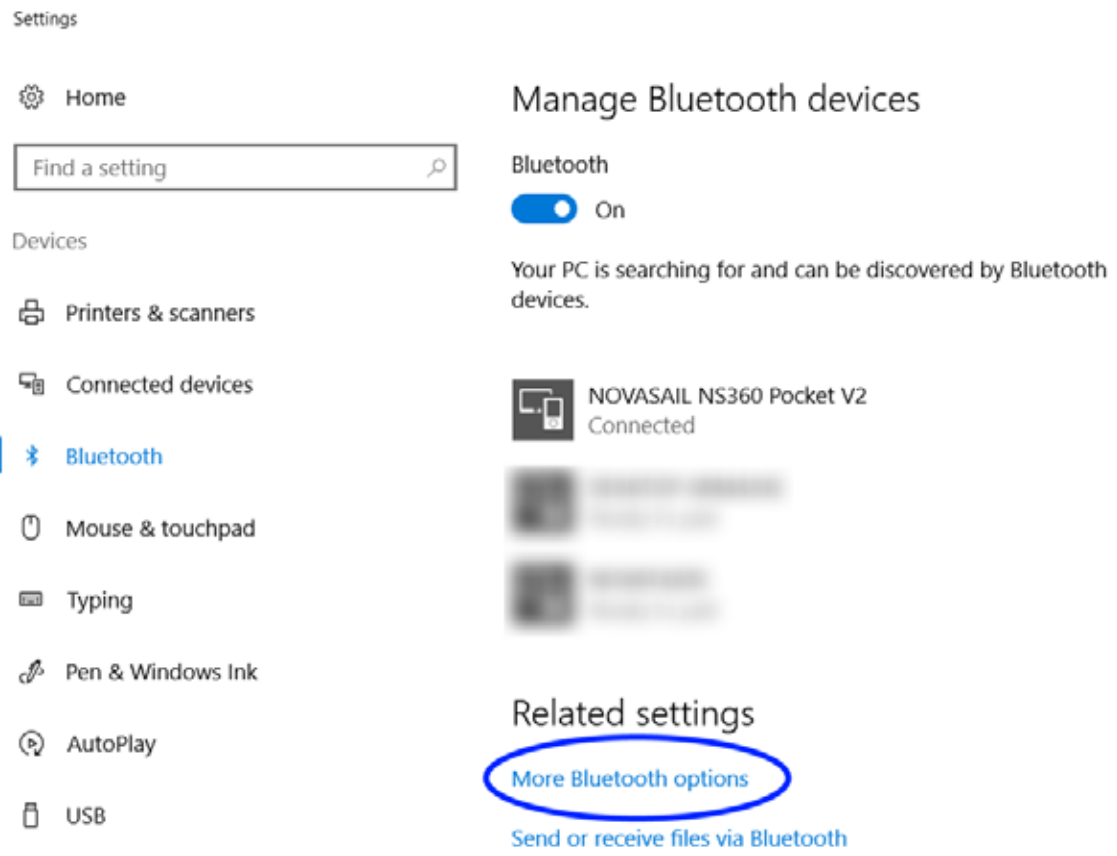
Troubleshooting

- Make sure the Bluetooth connectivity is activated on the PC
- Make sure to allow any Bluetooth device to find the PC in the operating system
- Close/re-open the "NS360 Pocket V2 Wireless Manager" app. Remove the **NS360 POCKET^{v2}** from the previously paired bluetooth devices and launch a new pairing process
- Make sure the PC mode on the **NS360 POCKET^{v2}** is turned on: “PC” **must** be blinking on the main display and “blu” (Bluetooth) must be shown on the lower line
- Confirm the **NS360 POCKET^{v2}** is indicated on the available Bluetooth devices on the PC
- The message 'connected' should appear in green at the bottom of the "NS360 Pocket V2 Wireless Manager" window within a minute (the delay is PC hardware dependant)

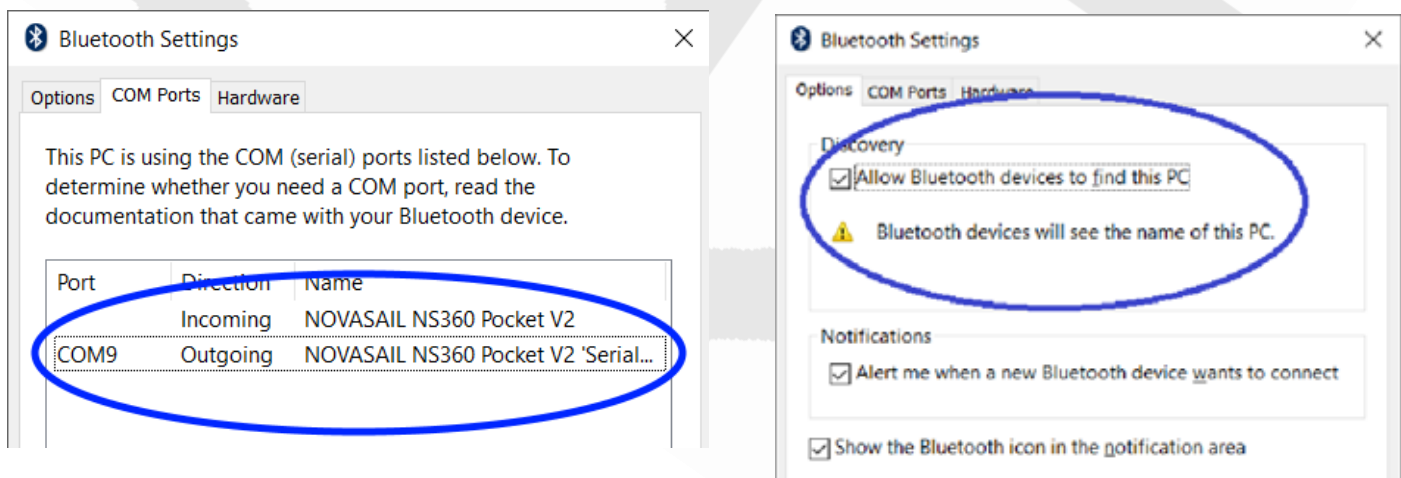
*Note: to save batteries the **NS360 POCKET^{v2}** will shut down automatically if no PC connectivity is detected for 10 minutes.*

Advanced Operations

Screen capture example, Windows 10 Bluetooth settings. Once the **NS360 POCKET^{V2}** is paired AND in an active connection (otherwise it will show as paired only) the device appears as followed:

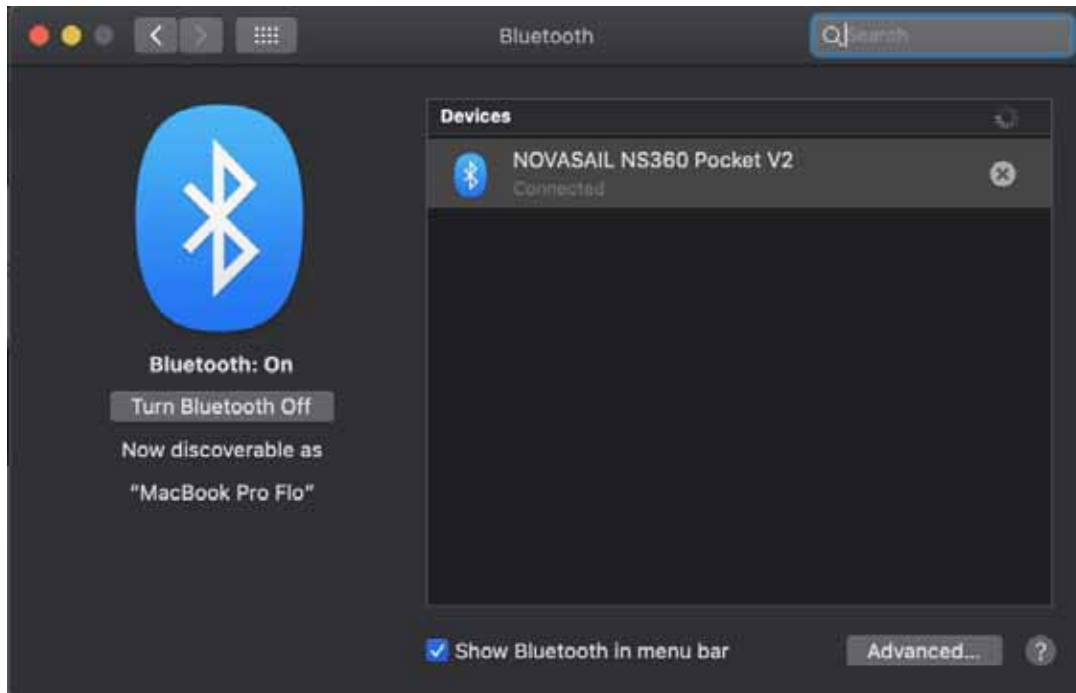


In the Bluetooth options (Windows 10 screen capture), additional information should be displayed as followed (the COM port numbers may be different):



Advanced Operations

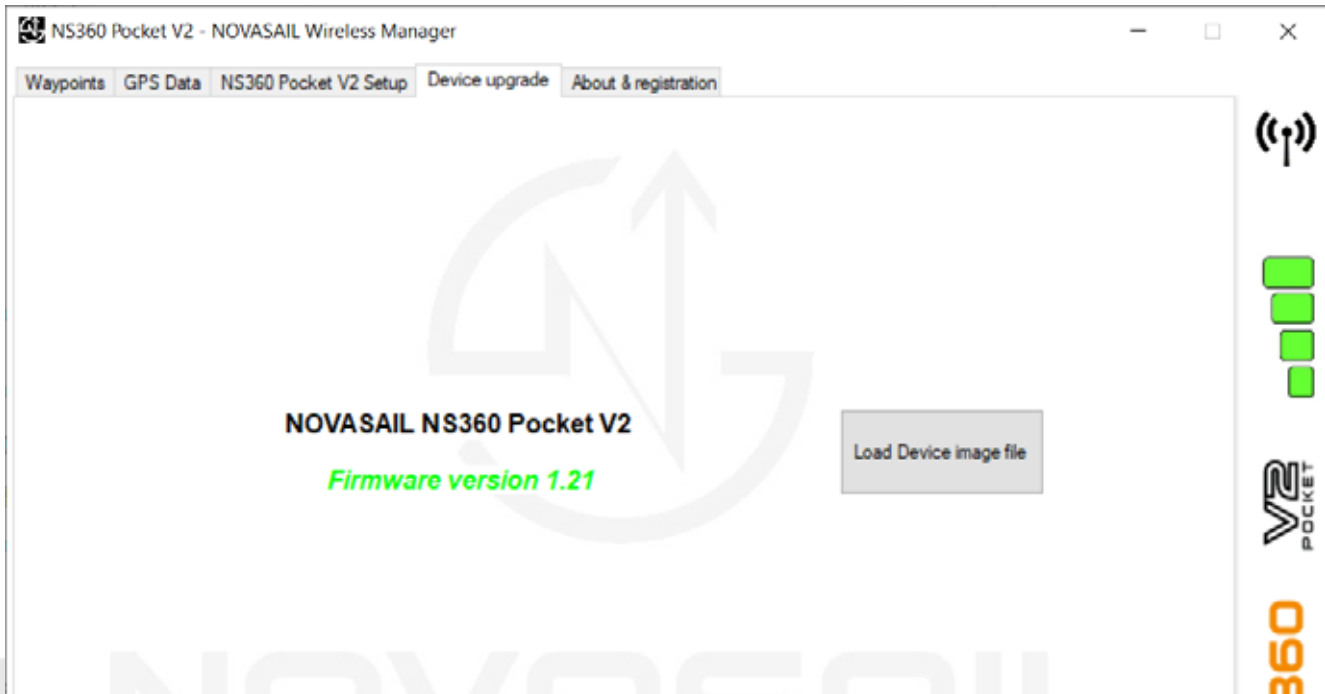
Screen capture example, MAC OS, Bluetooth preferences:





Advanced Operations


Anemometer mode

This feature is supported with the embedded firmware version 1.21 or above (update must be done if required).




To pair the external anemometer

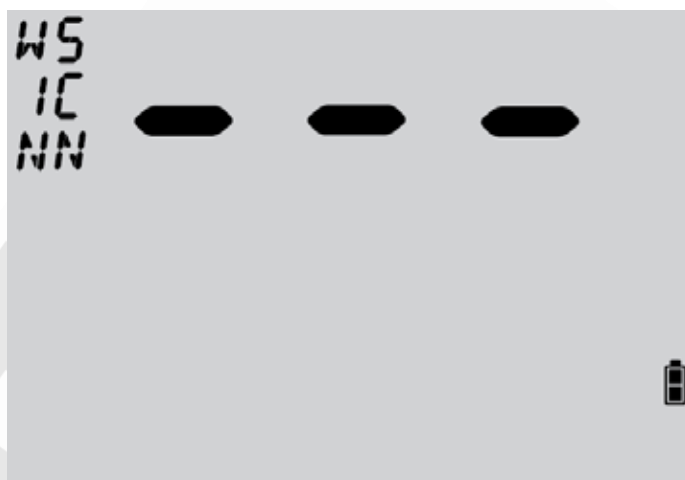
With the **NS360 POCKET^{V2}** switched off, press  then the lower  to enter the anemometer pairing mode

- a short press on  will select one of the 2 sub menus : reset (unpairing) or scan mode (search for anemometer)



Advanced Operations

- a long press on  will validate the current sub menu and start the scanning (search for anemometer) or the reset (unpairing) process



Note: the scanning will look for any compatible wind anemometer in the range (see “List of supported wind sensor anemometers”, page 30) and will store the connection information upon the end of this process. It allows the

NS360 POCKET^{v2} to identify and connect to your unique external anemometer.

Once successful the **NS360 POCKET^{v2}** will display the MAC address of the external anemometer found (“123456789F” in the following example); pushing any key will exit this mode and shutdown the device.

If several external anemometers are found in the range, the one with the strongest signal will be paired.

If no external anemometer is found “Fail” will be displayed.



Advanced Operations

List of supported wind sensor anemometers

- <https://www.openwind.de/> wireless solar powered wind instrument
- <https://calypsoinstruments.com/> ultrasonic wireless solar powered wind instrument

Note: the unpairing process can be used to discard any previous anemometer connection information and it allows to disable the anemometer function. At any time the scanning process can be re-launched to re-pair any previous or new anemometer devices.

After pairing an external anemometer, the **NS360 POCKET^{v2}** will be able to receive the wind information and display the corresponding data : true wind speed "TWS", true wind angle "TWA", apparent wind speed "AWS", apparent wind angle "AWS", the wind sensor battery level and the wind sensor internal temperature "dWI" (manufacturer dependant, displayed if supported)



Advanced Operations


In true or apparent wind speed menu (“TWS” or “AWS”), the


NS360 POCKET^{v2} will display the speed information on the main line and the angle information on the left column (see upper line on the above screen capture).

In true or apparent wind angle menu (“TWA” or “AWA”), the


NS360 POCKET^{v2} will display the angle information on the main line and the speed information on the left column (see lower line on the above screen capture).

Note: After power on, the **NS360 POCKET^{v2}** will search for the external anemometer associated (see “To pair the external anemometer”, page 28) during 3 minutes. If no detection is made after 3 minutes the

NS360 POCKET^{v2} will stop searching and the icon  won't be displayed anymore.

Note: During the searching process, the icon  will blink. Once detected it will be permanently displayed.

Note: In case the connection to the anemometer is lost, the

NS360 POCKET^{v2} will try to re-connect one time and the icon  will blink again.

Five sub-menus for the wind sensor data can be selected with  and .

- **AWS & AWA:** Apparent wind speed or apparent wind angle

Advanced Operations

This sub-mode provides the apparent wind information as received by the **NS360 POCKET^{v2}**. The apparent wind speed or the apparent wind direction can be displayed on the main line or the left column

- **TWS & TWA**: True wind speed or true wind angle

This sub-mode provides the true wind information as calculated by the **NS360 POCKET^{v2}** thanks to the GPS speed information. The true wind speed or the true wind direction can be displayed on the main line or the left column

- **DWI**: Data wind information

This sub-mode provides the battery level & temperature of the external wind sensor device (whenever available upon manufacturer spec)

Once the **NS360 POCKET^{v2}** receives the anemometer apparent wind data and the GPS speed information:

- the true wind angle (relative to the head of the vessel) is computed
- the direction of the wind blowing across the water is computed. In that case the wind direction reference used for the VMG mode (see “Velocity made good mode: VMG”, page 10) will be updated automatically.


*Note: once the anemometer is connected and the GPS trace is active (**LOG** icon is displayed), the **NS360 POCKET^{v2}** will record the wind information in the GPS trace. It can be exported with the PC software ‘Novasail Wireless Manager’ to a third party software for debriefing analysis.*

Central bargraph display in anemometer mode


The central bargraph will override its standard operation as described in the chapter “Central Bar Graph”, page 20. It will indicate the true wind angle on port and starboard.


Optimum true wind angle values in upwind on port and starboard are represented in the red and green areas on the following diagram.




The first segment  indicates a true wind angle value within 0 and 20 degrees. The subsequent segments will indicate a true wind angle increased by 10 degrees per segment showing.

For example:

-  means that the current true wind angle is 60-70 degrees on starboard

-  means that the current true wind angle is 30-40 degrees on starboard

-  means that the current true wind angle is 40-50 degrees on port

Note: whenever the true wind angle is out of the 20-70 degrees range, the first segment will blink for angles below 20 degrees and all the segments will blink for angles greater than 70 degrees.

Advanced Operations

User Calibration of the magnetic compass: CAL

This mode is enabled in the parameter tab of the "NS360 Pocket V2 Wireless Manager" PC software or when the upper **mode** button (first) and the lower **mode** buttons are pushed **simultaneously** to power on the device. The

NS360 POCKET^{V2} enters automatically a set of sub-menus to allow a self calibration of the magnetic compass. There are 7 sub-menus that have to be followed in the sequence described below.

To allow the maximum accuracy of the calibration procedure, it is recommended to perform this outdoors to avoid any magnetic disturbing fields. A wooden surface is highly recommended (eg a table) and it is necessary to ensure that there are no ferrous materials nearby (wrist watches should be removed).

On the lower screen of the display, the calibration sub-menu number is displayed. There are 7 steps to follow in order to complete the calibration of your

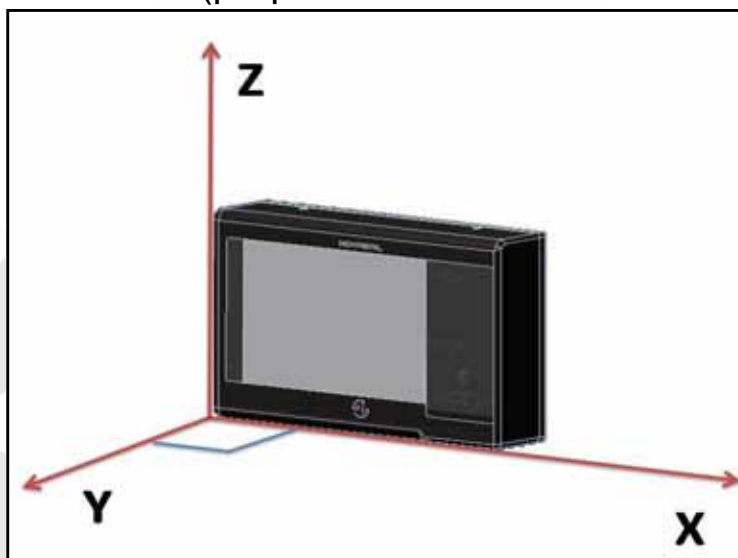
NS360 POCKET^{V2}. Upon completion of the sequence, the **NS360 POCKET^{V2}** will memorize the new values

If the **NS360 POCKET^{V2}** is shut down during the calibration, nothing will be memorized.

Note: Whenever necessary, the factory calibration values can be restored at any time in the compass calibration menu of the "NS360 Pocket V2 Wireless Manager".

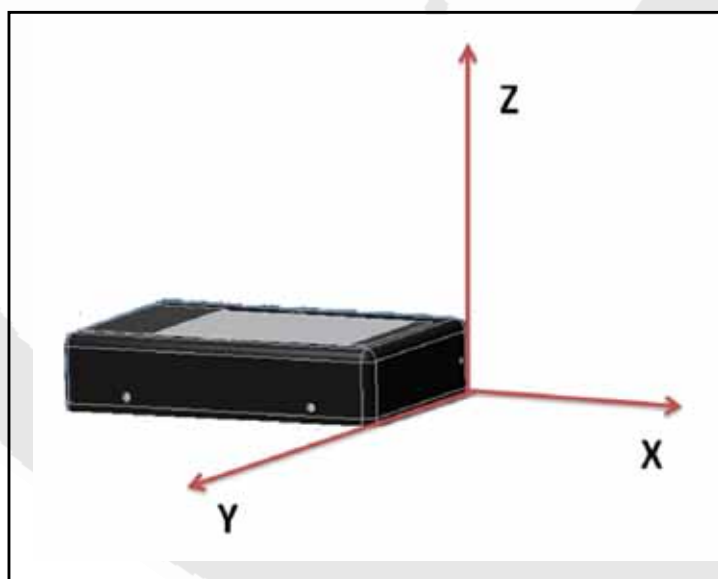
Advanced Operations

- Step 1: '1' is displayed. The **NS360 POCKET^{v2}** must be oriented as follows and stand still (perpendicular to the **horizontal XYplan**):



Push the lower **mode** key when ready. The **NS360 POCKET^{v2}** will enter the calibration along the axis.

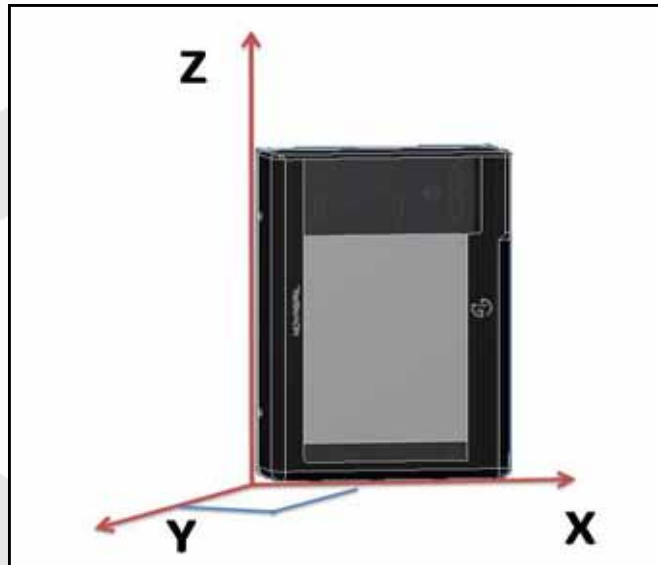
- Step 2: '2' is displayed. The **NS360 POCKET^{v2}** must be oriented as follows and stand still (perpendicular to the **horizontal XYplan**)::



Push the lower **mode** key when ready. The **NS360 POCKET^{v2}** will enter the calibration along the axis.

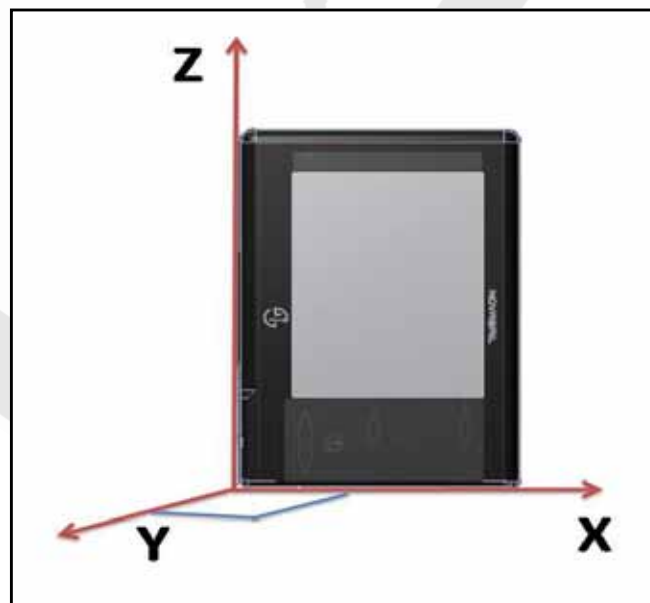
Advanced Operations

- Step 3: '3' is displayed. The **NS360 POCKET^{v2}** must be oriented as follows and stand still (perpendicular to the **horizontal XYplan**)::



Push the lower **mode** key when ready. The **NS360 POCKET^{v2}** will enter the calibration along the axis.

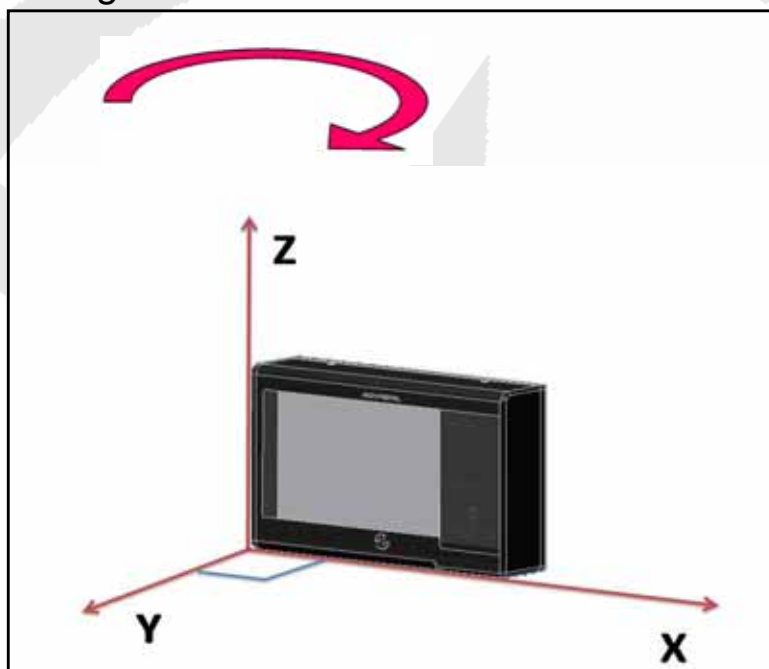
- Step 4: '4' is displayed. The **NS360 POCKET^{v2}** must be oriented as follows and stand still (perpendicular to the **horizontal XYplan** as follow)::



Advanced Operations

Push the lower **mode** key when ready. The **NS360 POCKET^{v2}** will enter the calibration along the axis.

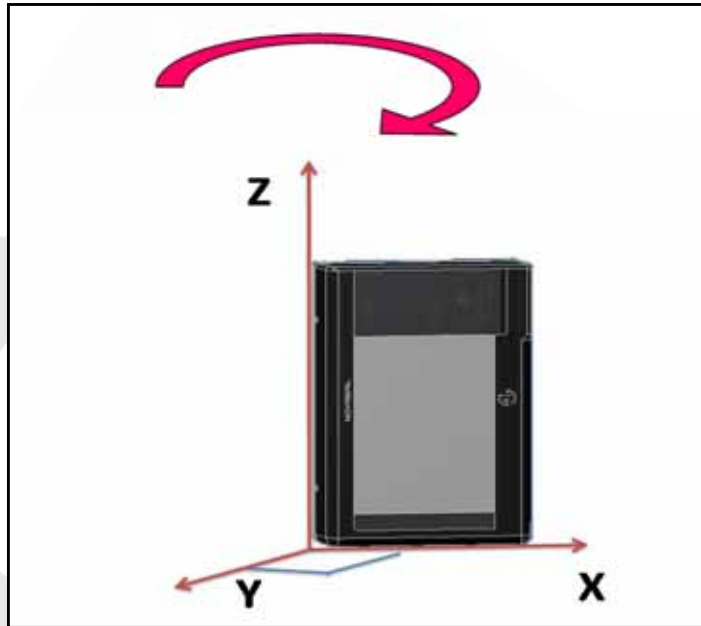
- Step 5 : '5' is displayed. The **NS360 POCKET^{v2}** must be rotated at least 1.5 to 2 turns while being maintained roughly perpendicular to an horizontal XY plan. The rotation (clockwise or anti clockwise) shall be done at an approximate rate of 30 seconds per turn while keeping the rotation axis centered along the Z axis.



Push the lower **mode** key when ready. The **NS360 POCKET^{v2}** will enter the calibration along the axis. The **NS360 POCKET^{v2}** will record the new calibration values once the end of the rotation is detected (2 turns or more might be necessary).

- Step 6 : '6' is displayed. The **NS360 POCKET^{v2}** must be rotated at least 1.5 to 2 turns while being maintained roughly perpendicular to an horizontal XY plan. The rotation (clockwise or anti clockwise) shall be done at an approximate rate of 30 seconds per turn while keeping the rotation axis centered along the Z axis.

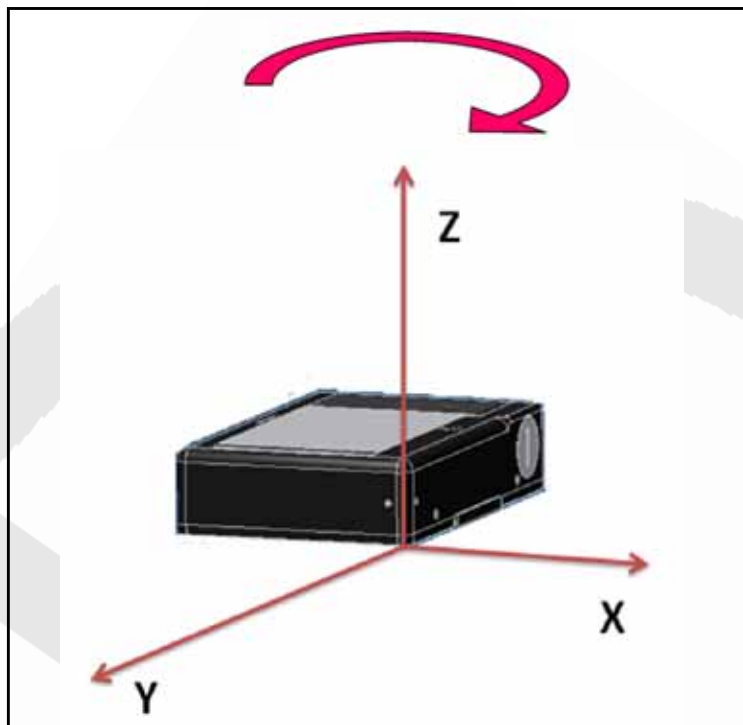
Advanced Operations



Push the lower **mode** key when ready. The **NS360 POCKET V2** will enter the calibration along the axis. The **NS360 POCKET V2** will record the new calibration values once the end of the rotation is detected (2 turns or more might be necessary).

- Step 7 : '7' is displayed. The **NS360 POCKET V2** must be rotated at least 1.5 to 2 turns while being maintained roughly perpendicular to an horizontal XY plan. The rotation (clockwise or anti clockwise) shall be done at an approximate rate of 30 seconds per turn while keeping the rotation axis centered along the Z axis.:

Advanced Operations



Push the lower **mode** key when ready. The **NS360 POCKET^{v2}** will enter the calibration along the axis. The **NS360 POCKET^{v2}** will record the new calibration values once the end of the rotation is detected (2 turns or more might be necessary).

“END” will be displayed on the lower line, push the lower **mode** key to switch off the device.

Document history

Version 1.0: First version

Version 1.1: Added VMG mode

Version 1.2: Updated route mode chapter

Version 1.3: Modified 'Switching power ON/OFF' chapter: corrosive products

Version 1.4: Modified 'Calibration' chapter (new user calibration process)

Version 1.5: Added anemometer support chapter, modified bargraph chapter, modified VMG mode chapter, modified GPS record status chapter, removed SLD GPS start line distance sub-menu, added bearing to start line in SLD mode

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 - Disassembly or modification for purposes other than it was originally intended for
 - Failure caused by a fire, earthquake or flood
 - Damage/failure caused by an impact
 - Failure caused by inappropriate services performed by anyone other than Novasail's customer service center or one of Novasail's service specified partners
- For assistance please contact Novasail service center:

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